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A SYSTEM AND METHOD FOR
SEAMLESS MULTIPLEXING OF EMBEDDED BITSTREAMS

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ABSTRACT OF THE INVENTION

A "seamless multiplexer," as described herein, provides a flexible and
efficient system and method for multiplexing embedded coded bitstreams.
Further, unlike the conventional JPEG 2000 standard, the seamless multiplexer
15   is capable of decoding multiplexed encoded bitstreams without the need to use a
demultiplexing aide as overhead in the encoded signal. In general, the seamless
multiplexer provides a novel approach for multiplexing code block bitstreams by
using a "decoder pointer," for multiplexing multiple embedded bitstreams without
the use of a demultiplexing aide. Consequently, the seamless multiplexer not
20   only reduces any multiplexing overhead, but also allows much smaller granularity
of access in reshaping the compressed input signal. In addition, in one
embodiment, the seamless multiplexer also uses dependencies between
coefficient blocks to further improve overall compression efficiency.